

appearance, suggest calciferous glands. But, if we compare *Alma emini*, Mich., we may assume for the present that they are receptacles for spermatozoa. I find no other spermathecæ, nor are sperm-tunnels present in the specimen sectionized. The sexual apparatus being degenerate, I can only discover a few traces of the ovary or testes, especially in the twelfth segment.

As I know all the Oligochaets which have been found in this country, both indigenous and imported, I have no hesitation in saying that *Anagaster* is a true British representative of the subfamily Criodrilinæ.

Definition: *Anagaster fontinalis*, sp. n.

Length 2 inches, segments 100. Girdle on segments 21, 22-32, 33, saddle-shaped, and very conspicuous. Tubercular band on segments 29-31; these segments, as well as 11-14, being more tumid. Male pores, with large papilla extending over the two adjoining segments, on 15. No head-pore or dorsal pores, calciferous, œsophageal, septal, or coelomic glands. Typhlosole with valve-like arrangement. Seminal vessels in segments 9-12. Large heart to vascular system in the tenth segment. Setæ paired, not ornamented. Spermathecæ appear to be absent; no muscular gizzard; pharynx modified laterally.

*Hab.* Taken from a well at North Terrace, Mildenhall, Suffolk, June 1907.

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#### XII.—*New Species of Palæartic Simuliidæ in the British Museum (Diptera Nematocera).* By F. W. EDWARDS.

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##### *Simulium (Prosimulium) gallii*, sp. n., ♀.

Very similar to *S. (P.) hirtipes*, Fries, in structure and coloration, differing only as follows:—Front distinctly broader than in *hirtipes*, very little narrower at the level of

the antennæ than at the vertex. Pubescence of thorax and abdomen rather finer than in *hirtipes*, while on thorax, abdomen, and legs the pubescence is brighter yellow, almost golden, not dull yellowish white as in *hirtipes*. Femora yellowish on the basal half or more. All tibiæ conspicuously yellowish in the middle, basal and apical sixths black. Tarsi entirely black (as in *S. hirtipes*).

SWITZERLAND: Canton du Valais—Gruben, 1847 m., viii. 1920, and Lac de Champex, 1465 m., ix. 1920 (*Prof. Galli-Valerio*). The collector writes: "They were in swarms and very unpleasant, entering into the nose, mouth, and eyes, but I was never bitten."

Type and eight other females presented to the British Museum by the collector; others returned to him. The other European species, which probably, though not certainly, belong to the subgenus (*rufum*, Mg., *ferrugineum*, Wahlg., and *pallipes*, Fries), are quite distinct; *macropyga*, Lundst., is no doubt a *Prosimulium*, but is known only in the male sex, and may not be distinct from *hirtipes*. None of these four species are represented in the British Museum collection.

*Simulium (Prosimulium) fulvipes*, sp. n., ♀.

Closely related to *S. (P.) hirtipes*, Fries, and *S. (P.) gallii*, sp. n., differing as follows:—Front wider than in *hirtipes*, but narrower than in *gallii*, being about one and a half times as broad at the vertex (that is, between the angles of the eyes) as it is at the level of the antennæ (in Scottish examples of *hirtipes* it is almost twice as broad between the angles of the eyes as it is just above the antennæ). Pubescence of thorax rather yellower than in *hirtipes*, but not so distinctly golden nor so dense as in *gallii*. Scutellum reddish. Femora and tibiæ almost entirely yellowish, only the bases and tips of the latter dark; bases of metatarsi also distinctly yellowish, at least on four front legs; second joint of hind tarsi also more or less yellowish at the base. Costal veins paler than in *hirtipes* or *gallii*.

BULGARIA: Mt. Rila, 2000 m., 2. ix. 1906 (*Prof. Schischkoff*).

Type and two other females presented to the British Museum by the collector.

A female from Thues les Bains, Pyr. Or., S. France, 26. vi. 1900 (*Lord Walsingham*), may be conspecific, but lacks the pale bases to the anterior metatarsi. This may possibly be Meigen's *S. rufipes*, which, however, is described as having a reddish-brown abdomen.

*Simulium* (s. str.) *gracilipes*, sp. n., ♀.

*Head*: face yellowish brown, heavily dusted with pale grey. Front broad, almost parallel-sided, darker in colour than the face, slightly shining, with bluish metallic reflections in certain lights. Back of head dull dark grey, with fine yellowish pubescence. Proboscis yellow; antennæ and palpi yellow except at the tips. *Thorax*: anterior margin of mesonotum rather broadly yellowish, covered with a silvery dusting, when viewed from in front; viewed from the same angle there is also a narrow median longitudinal silvery stripe extending backwards one-third of the length of the mesonotum, where it broadens out almost to the width of the mesonotum and is just connected with a pair of silvery spots which are almost surrounded by velvety black. Viewed from behind the distribution of the silvery and black colours is reversed. Posterior half of mesonotum blackish grey, slightly shining. Pubescence sparse, fine and yellowish. Pleuræ dark, grey-dusted, bare except for the usual small hair-tuft. Scutellum reddish. *Abdomen*: fringe of first segment short, pale. Second tergite silvery at sides. Third to fifth segments dull black; sixth to ninth tergites brown, slightly shining. *Legs* mainly yellow. Front coxæ, femora, and tibiæ entirely yellow, the last with a just perceptible silvery dusting on the outer side. Front tarsi blackish; the metatarsus noticeably paler towards the base, long and narrow, scarcely at all enlarged vertically, with a pair of long hairs at its tip; a single long hair at the tip of the third joint. Middle legs yellow; the coxæ and the tips of the tarsal joints dark. Hind coxæ dark; femora yellow, indistinctly darkened at the tip; tibiæ yellow, rather indistinctly darkened near base, along outer margin, and at tip; first two tarsal joints yellow, with dark tips, last three entirely dark. Claws all simple, rather large. *Wings* normal. *Halteres* clear yellow.

Length of body 3.5 mm.

MOROCCO: Fez, May 1909, on mule (*Major C. E. P. Fowler, R.A.M.C.*); a single female.

A very distinct species, probably belonging to the *S. ornatum* group, but with no very close ally in the Palæartic fauna, but approaching *S. subornatum* in some respects. The slender front tarsi are distinctive. The specimen appears to be somewhat immature; when fully hardened the dark markings of the legs might be rather more extensive.